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<110> Takeda Pharmaceutical Company Limited

<120> Preventing or treating agent for cancer

<130> P04-215PCT

<150> JP 2003-427782
<151> 2003-12-24

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785                    790                    795                    800
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Thr Leu Tyr Val Gly Ala Arg Glu Ala Leu Phe Ala Leu Ser Ser Asn
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cctgtggtgc tgccccctga gacccgccca ctcaacggcc tagggccccc tagcacccg  2580
ctcgatcacc gagggtacca gtccctgtca gacagccccc cggggtcccg agtcttcact  2640
gagtcagaga agaggccact cagcatccaa gacagcttcg tggaggtatc cccagtgtgc  2700
ccccggcccc gggtccgcct tggctcggag atccgtgact ctgtggtgtg agagctgact  2760
tccagaggac gctgccctgg cttcaggggc tgtgaatgct cggagagggt caactggacc  2820
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cagggaagag actgtcgcct gccttcctcc gttgttgcgt gagaacccgt gtgccccttc  3540
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gtcctctccc cagtccccag ttcaccctcc atccctcacc ttcctccact ctaagggata  3660
tcaacactgc ccagcacagg ggccctgaat ttatgtggtt tttatacatt ttttaataag  3720
atgcacttta tgtcattttt taataaagtc tgaagaatta ctgttt            3766
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<210> 10
<211> 837
<212> PRT
<213> Homo sapiens

<400> 10
Met Leu Arg Thr Ala Met Gly Leu Arg Ser Trp Leu Ala Ala Pro Trp
                5   10   15
Gly Ala Leu Pro Pro Arg Pro Pro Leu Leu Leu Leu Leu Leu Leu Leu
            20   25   30
Leu Leu Leu Gln Pro Pro Pro Pro Thr Trp Ala Leu Ser Pro Arg Ile

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```
                 35                    40                    45
Ser Leu Pro Leu Gly Ser Glu Glu Arg Pro Phe Leu Arg Phe Glu Ala
     50                    55                    60
Glu His Ile Ser Asn Tyr Thr Ala Leu Leu Leu Ser Arg Asp Gly Arg
 65                    70                    75                    80
Thr Leu Tyr Val Gly Ala Arg Glu Ala Leu Phe Ala Leu Ser Ser Asn
                 85                    90                    95
Leu Ser Phe Leu Pro Gly Gly Glu Tyr Gln Glu Leu Leu Trp Gly Ala
                100                   105                   110
Asp Ala Glu Lys Lys Gln Gln Cys Ser Phe Lys Gly Lys Asp Pro Gln
                115                   120                   125
Arg Asp Cys Gln Asn Tyr Ile Lys Ile Leu Leu Pro Leu Ser Gly Ser
           130                   135                   140
His Leu Phe Thr Cys Gly Thr Ala Ala Phe Ser Pro Met Cys Thr Tyr
145                   150                   155                   160
Ile Asn Met Glu Asn Phe Thr Leu Ala Arg Asp Glu Lys Gly Asn Val
                165                   170                   175
Leu Leu Glu Asp Gly Lys Gly Arg Cys Pro Phe Asp Pro Asn Phe Lys
                180                   185                   190
Ser Thr Ala Leu Val Val Asp Gly Glu Leu Tyr Thr Gly Thr Val Ser
           195                   200                   205
Ser Phe Gln Gly Asn Asp Pro Ala Ile Ser Arg Ser Gln Ser Leu Arg
210                   215                   220
Pro Thr Lys Thr Glu Ser Ser Leu Asn Trp Leu Gln Asp Pro Ala Phe
225                   230                   235                   240
Val Ala Ser Ala Tyr Ile Pro Glu Ser Leu Gly Ser Leu Gln Gly Asp
                245                   250                   255
Asp Asp Lys Ile Tyr Phe Phe Phe Ser Glu Thr Gly Gln Glu Phe Glu
           260                   265                   270
Phe Phe Glu Asn Thr Ile Val Ser Arg Ile Ala Arg Ile Cys Lys Gly
           275                   280                   285
Asp Glu Gly Gly Glu Arg Val Leu Gln Gln Arg Trp Thr Ser Phe Leu
290                   295                   300
Lys Ala Gln Leu Leu Cys Ser Arg Pro Asp Asp Gly Phe Pro Phe Asn
305                   310                   315                   320
Val Leu Gln Asp Val Phe Thr Leu Ser Pro Ser Pro Gln Asp Trp Arg
                325                   330                   335
Asp Thr Leu Phe Tyr Gly Val Phe Thr Ser Gln Trp His Arg Gly Thr
           340                   345                   350
Thr Glu Gly Ser Ala Val Cys Val Phe Thr Met Asn Asp Val Gln Arg
           355                   360                   365
Val Phe Ser Gly Leu Tyr Lys Glu Val Asn Arg Glu Thr Gln Gln Met
370                   375                   380
Val His Arg Asp Pro Pro Val Pro Thr Pro Arg Pro Gly Ala Cys Ile
385                   390                   395                   400
Thr Asn Ser Ala Arg Glu Arg Lys Ile Asn Ser Ser Leu Gln Leu Pro
           405                   410                   415
Asp Arg Val Leu Asn Phe Leu Lys Asp His Phe Leu Met Asp Gly Gln
           420                   425                   430
Val Arg Ser Arg Met Leu Leu Leu Gln Pro Gln Ala Arg Tyr Gln Arg
           435                   440                   445
Val Ala Val His Arg Val Pro Gly Leu His His Thr Tyr Asp Val Leu
450                   455                   460
Phe Leu Gly Thr Gly Asp Gly Arg Leu His Lys Ala Val Ser Val Gly
465                   470                   475                   480
Pro Arg Val His Ile Ile Glu Glu Leu Gln Ile Phe Ser Ser Gly Gln
                485                   490                   495
Pro Val Gln Asn Leu Leu Leu Asp Thr His Arg Gly Leu Leu Tyr Ala
           500                   505                   510
Ala Ser His Ser Gly Val Val Gln Val Pro Met Ala Asn Cys Ser Leu
```
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            515                    520                    525
Tyr Arg Ser Cys Gly Asp Cys Leu Leu Ala Arg Asp Pro Tyr Cys Ala
    530                    535                    540
Trp Ser Gly Ser Ser Cys Lys His Val Ser Leu Tyr Gln Pro Gln Leu
545                    550                    555                    560
Ala Thr Arg Pro Trp Ile Gln Asp Ile Glu Gly Ala Ser Ala Lys Asp
                565                    570                    575
Leu Cys Ser Ala Ser Ser Val Val Ser Pro Ser Phe Val Pro Thr Gly
        580                    585                    590
Glu Lys Pro Cys Glu Gln Val Gln Phe Gln Pro Asn Thr Val Asn Thr
        595                    600                    605
Leu Ala Cys Pro Leu Leu Ser Asn Leu Ala Thr Arg Leu Trp Leu Arg
    610                    615                    620
Asn Gly Ala Pro Val Asn Ala Ser Ala Ser Cys His Val Leu Pro Thr
625                    630                    635                    640
Gly Asp Leu Leu Leu Val Gly Thr Gln Gln Leu Gly Glu Phe Gln Cys
                645                    650                    655
Trp Ser Leu Glu Glu Gly Phe Gln Gln Leu Val Ala Ser Tyr Cys Pro
                660                    665                    670
Glu Val Val Glu Asp Gly Val Ala Asp Gln Thr Asp Glu Gly Gly Ser
        675                    680                    685
Val Pro Val Ile Ile Ser Thr Ser Arg Val Ser Ala Pro Ala Gly Gly
    690                    695                    700
Lys Ala Ser Trp Gly Ala Asp Arg Ser Tyr Trp Lys Glu Phe Leu Val
705                    710                    715                    720
Met Cys Thr Leu Phe Val Leu Ala Val Leu Leu Pro Val Leu Phe Leu
                725                    730                    735
Leu Tyr Arg His Arg Asn Ser Met Lys Val Phe Leu Lys Gln Gly Glu
                740                    745                    750
Cys Ala Ser Val His Pro Lys Thr Cys Pro Val Val Leu Pro Pro Glu
                755                    760                    765
Thr Arg Pro Leu Asn Gly Leu Gly Pro Pro Ser Thr Pro Leu Asp His
    770                    775                    780
Arg Gly Tyr Gln Ser Leu Ser Asp Ser Pro Pro Gly Ser Arg Val Phe
785                    790                    795                    800
Thr Glu Ser Glu Lys Arg Pro Leu Ser Ile Gln Asp Ser Phe Val Glu
                805                    810                    815
Val Ser Pro Val Cys Pro Arg Pro Arg Val Arg Leu Gly Ser Glu Ile
                820                    825                    830
Arg Asp Ser Val Val
                835
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<210> 11
<211> 2511
<212> DNA
<213> Homo sapiens

<400> 11
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atgctgcgca ccgcgatggg cctgaggagc tggctcgccg ccccatgggg cgcgctgccg    60
cctcggccac cgctgctgct gctcctgctg ctgctgctcc tgctgcagcc gccgcctccg   120
acctgggcgc tcagcccccg gatcagcctg cctctgggct ctgaagagcg gccattcctc   180
agattcgaag ctgaacacat ctccaactac acagcccttc tgctgagcag ggatggcagg   240
accctgtacg tgggtgctcg agaggccctc tttgcactca gtagcaacct cagcttcctg   300
ccaggcgggg agtaccagga gctgctttgg ggtgcagacg cagagaagaa acagcagtgc   360
agcttcaagg gcaaggaccc acagcgcgac tgtcaaaact acatcaagat cctcctgccg   420
ctcagcggca gtcacctgtt cacctgtggc acagcagcct cagccccat gtgtacctac    480
atcaacatgg agaacttcac cctggcaagg gacgagaagg ggaatgtcct cctggaagat   540
ggcaagggcc gttgtccctt cgacccgaat ttcaagtcca ctgccctggt ggttgatggc   600
gagctctaca ctggaacagt cagcagcttc caagggaatg acccggccat ctcgcggagc   660
caaagccttc gccccaccaa gaccgagagc tccctcaact ggctgcaaga cccagctttt   720
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```
gtggcctcag cctacattcc tgagagcctg ggcagcttgc aaggcgatga tgacaagatc    780
tacttttct tcagcgagac tggccaggaa tttgagttct ttgagaacac cattgtgtcc    840
cgcattgccc gcatctgcaa gggcgatgag ggtggagagc gggtgctaca gcagcgctgg    900
acctccttcc tcaaggccca gctgctgtgc tcacggcccg acgatggctt cccccttcaac   960
gtgctgcagg atgtcttcac gctgagcccc agcccccagg actggcgtga caccctttc   1020
tatggggtct tcacttccca gtggcacagg ggaactacag aaggctctgc cgtctgtgtc   1080
ttcacaatga atgatgtgca gagagtcttc agcggcctct acaaggaggt gaaccgtgag   1140
acacagcaga tggtacaccg tgacccaccc gtgcccacac cccggcctgg agcgtgcatc   1200
accaacagtg cccgggaaag gaagatcaac tcatccctgc agctcccaga ccgcgtgctg   1260
aactttctca aggaccactt cctgatggac gggcaggtcc gaagccgcat gctgctgctg   1320
cagccccagg ctcgctacca gcgcgtggct gtacaccgcg tccctggcct gcaccacacc   1380
tacgatgtcc tcttcctggg cactggtgac ggccggctcc acaaggcagt gagcgtgggc   1440
ccccgggtgc acatcattga ggagctgcag atcttctcat cgggacagcc cgtgcagaat   1500
ctgctcctgg acacccacag ggggctgctg tatgcggcct cacactcggg cgtagtccag   1560
gtgcccatgg ccaactgcag cctgtaccgg agctgtgggg actgcctcct cgcccgggac   1620
ccctactgtg cttggagcgg ctccagctgc aagcacgtca gcctctacca gcctcagctg   1680
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gagggcttcc agcagctggt agccagctac tgcccagagg tggtggagga cggggtggca   2040
gaccaaacag atgagggtgg cagtgtaccc gtcattatca gcacatcgcg tgtgagtgca   2100
ccagctggtg gcaaggccag ctggggtgca gacaggtcct actggaagga gttcctggtg   2160
atgtgcacgc tctttgtgct ggccgtgctg ctcccagttt tattcttgct ctaccggcac   2220
cggaacagca tgaaagtctt cctgaagcag ggggaatgtg ccagcgtgca ccccaagacc   2280
tgccctgtgg tgctgccccc tgagacccgc ccactcaacg gcctagggcc ccctagcacc   2340
ccactcgatc accgagggta ccagtccctg tcagacagcc ccccggggtc ccgagtcttc   2400
actgagtcag agaagaggcc actcagcatc caagacagct tcgtggaggt atccccagtg   2460
tgcccccggc cccgggtccg ccttggctcg gagatccgtg actctgtggt g           2511
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<210> 12
<211> 3766
<212> DNA
<213> Homo sapiens

<400> 12
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aggggctgag tttgccaggg cccacttgac cctgtttccc acctcccgcc ccccaggtcc    120
ggaggcgggg gcccccgggg cgactcgggg gcggaccgcg gggcggagct gccgcccgtg    180
agtccggccg agccacctga gcccgagccg cgggacaccg tcgctccgtg tctccgaatg    240
ctgcgcaccg cgatgggcct gaggagctgg ctcgccgccc catggggcgc gctgccgcct    300
cggccaccgc tgctgctgct cctgctgctg ctgctcctgc tgcagccgcc gcctccgacc    360
tgggcgctca gccccaggat cagcctgcct ctgggctctg aagagcggcc attcctcaga    420
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ctgtacgtgg gtgctcgaga ggccctcttt gcactcagta gcaacctcag cttcctgcca    540
ggcggggagt accaggagct gctttggggt gcagacgcag agaagaaaca gcagtgcagc    600
ttcaagggca aggacccaca gcgcgactgt caaaactaca tcaagatcct cctgccgctc    660
agcggcagtc acctgttcac ctgtggcaca gcagccttca gccccatgtg tacctacatc    720
aacatggaga acttcacccct ggcaagggac gagaagggga atgtcctcct ggaagatggc    780
aagggccgtt gtcccttcga cccgaatttc aagtccactg ccctggtggt tgatggcgag    840
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gcctcagcct acattcctga gcctgggc agcttgcaag gcgatgatga caagatctac   1020
tttttcttca gcgagactgg ccaggaattt gagttctttg agaacaccat tgtgtcccgc   1080
attgcccgca tctgcaaggg cgatgagggt ggagagcggg tgctacagca gcgctggacc   1140
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ctgcaggatg tcttcacgct gagccccagc ccccaggact ggcgtgacac ccttttctat   1260
ggggtcttca cttcccagtg gcacagggga actacagaag gctctgccgt ctgtgtcttc   1320
acaatgaatg atgtgcagag agtcttcagc ggcctctaca aggaggtgaa ccgtgagaca   1380
```

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```

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cagcagatgg tacaccgtga cccacccgtg cccacacccc ggcctggagc gtgcatcacc    1440
aacagtgccc gggaaaggaa gatcaactca tccctgcagc tcccagaccg cgtgctgaac    1500
tttctcaagg accacttcct gatggacggg caggtccgaa gccgcatgct gctgctgcag    1560
ccccaggctc gctaccagcg cgtggctgta caccgcgtcc ctggcctgca ccacacctac    1620
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cccatggcca actgcagcct gtaccggagc tgtgggggact gcctcctcgc ccgggacccc    1860
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gagtcagaga agaggccact cagcatccaa gacagcttcg tggaggtatc cccagtgtgc    2700
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ctgccgtcgt cccaccacct cagggaccag agggctaggt tggcactgcg gccctcacca    3360
ggtcctgggc tcggacccaa ctcctggacc tttccagcct gtatcaggct gtggccacac    3420
gagaggacag cgcgagctca ggagagattt cgtgacaatg tacgcctttc cctcagaatt    3480
cagggaagag actgtcgcct gccttcctcc gttgttgcgt gagaacccgt gtgcccctc    3540
ccaccatatc caccctcgct ccatctttga actcaaacac gaggaactaa ctgcaccctg    3600
gtcctctccc cagtccccag ttcaccctcc atccctcacc ttcctccact ctaagggata    3660
tcaacactgc ccagcacagg ggccctgaat ttatgtggtt tttatacatt ttttaataag    3720
atgcacttta tgtcattttt aataaagtc tgaagaatta ctgttt               3766
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<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 13
cagtgccaac ctagccctct   20

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

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<400> 14
tctcccgatc caaccgtgac                                                    20

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 15
caacaactac atcctcggct                                                    20

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 16
tcggctccta catcaacaac                                                    20

<210> 17
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 17
cctcgcccgg gacccctact gtgc                                               24

<210> 18
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 18
cttggcgctg gctccctcga tgtcctg                                            27

<210> 19
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 19
aattgaattc atgctgcgca ccgcgatg                                           28

<210> 20
<211> 30
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<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 20
aagctctaga caccacagag tcacggatct                                      30

<210> 21
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 21
aagctctaga tcacaccaca gagtcacgga                                      30

<210> 22
<211> 12
<212> PRT
<213> Homo sapiens

<400> 22
Asn Ser Ala Arg Glu Arg Lys Ile Asn Ser Ser Cys
                5                   10

<210> 23
<211> 15
<212> PRT
<213> Homo sapiens

<400> 23
Ser Val Val Ser Pro Ser Phe Val Pro Thr Gly Glu Lys Pro Cys
                5                   10                  15

<210> 24
<211> 15
<212> PRT
<213> Homo sapiens

<400> 24
Pro Leu Asp His Arg Gly Tyr Gln Ser Leu Ser Asp Ser Pro Cys
                5                   10                  15

<210> 25
<211> 14
<212> PRT
<213> Homo sapiens

<400> 25
Ser Arg Val Phe Thr Glu Ser Glu Lys Arg Pro Leu Ser Cys
                5                   10

<210> 26
<211> 2135
<212> PRT
<213> Homo sapiens
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<400> 26

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                  5                   10                  15
Val Leu Thr Leu Gln Pro Leu Pro Pro Thr Ala Phe Thr Pro Asn Gly
              20                  25                  30
Thr Tyr Leu Gln His Leu Ala Arg Asp Pro Thr Ser Gly Thr Leu Tyr
          35                  40                  45
Leu Gly Ala Thr Asn Phe Leu Phe Gln Leu Ser Pro Gly Leu Gln Leu
      50                  55                  60
Glu Ala Thr Val Ser Thr Gly Pro Val Leu Asp Ser Arg Asp Cys Leu
65                  70                  75                  80
Pro Pro Val Met Pro Asp Glu Cys Pro Gln Ala Gln Pro Thr Asn Asn
                  85                  90                  95
Pro Asn Gln Leu Leu Leu Val Ser Pro Gly Ala Leu Val Val Cys Gly
              100                 105                 110
Ser Val His Gln Gly Val Cys Glu Gln Arg Arg Leu Gly Gln Leu Glu
          115                 120                 125
Gln Leu Leu Leu Arg Pro Glu Arg Pro Gly Asp Thr Gln Tyr Val Ala
      130                 135                 140
Ala Asn Asp Pro Ala Val Ser Thr Val Gly Leu Val Ala Gln Gly Leu
145                 150                 155                 160
Ala Gly Glu Pro Leu Leu Phe Val Gly Arg Gly Tyr Thr Ser Arg Gly
                  165                 170                 175
Val Gly Gly Gly Ile Pro Pro Ile Thr Thr Arg Ala Leu Trp Pro Pro
              180                 185                 190
Asp Pro Gln Ala Ala Phe Ser Tyr Glu Glu Thr Ala Lys Leu Ala Val
          195                 200                 205
Gly Arg Leu Ser Glu Tyr Ser His His Phe Val Ser Ala Phe Ala Arg
      210                 215                 220
Gly Ala Ser Ala Tyr Phe Leu Phe Leu Arg Arg Asp Leu Gln Ala Gln
225                 230                 235                 240
Ser Arg Ala Phe Arg Ala Tyr Val Ser Arg Val Cys Leu Arg Asp Gln
              245                 250                 255
His Tyr Tyr Ser Tyr Val Glu Leu Pro Leu Ala Cys Glu Gly Gly Arg
          260                 265                 270
Tyr Gly Leu Ile Gln Ala Ala Ala Val Ala Thr Ser Arg Glu Val Ala
      275                 280                 285
His Gly Glu Val Leu Phe Ala Ala Phe Ser Ser Ala Ala Pro Pro Thr
      290                 295                 300
Val Gly Arg Pro Pro Ser Ala Ala Ala Gly Ala Ser Gly Ala Ser Ala
305                 310                 315                 320
Leu Cys Ala Phe Pro Leu Asp Glu Val Asp Arg Leu Ala Asn Arg Thr
              325                 330                 335
Arg Asp Ala Cys Tyr Thr Arg Glu Gly Arg Ala Glu Asp Gly Thr Glu
              340                 345                 350
Val Ala Tyr Ile Glu Tyr Asp Val Asn Ser Asp Cys Ala Gln Leu Pro
      355                 360                 365
Val Asp Thr Leu Asp Ala Tyr Pro Cys Gly Ser Asp His Thr Pro Ser
      370                 375                 380
Pro Met Ala Ser Arg Val Pro Leu Glu Ala Thr Pro Ile Leu Glu Trp
385                 390                 395                 400
Pro Gly Ile Gln Leu Thr Ala Val Ala Val Thr Met Glu Asp Gly His
              405                 410                 415
Thr Ile Ala Phe Leu Gly Asp Ser Gln Gly Gln Leu His Arg Val Tyr
              420                 425                 430
Leu Gly Pro Gly Ser Asp Gly His Pro Tyr Ser Thr Gln Ser Ile Gln
      435                 440                 445
Gln Gly Ser Ala Val Ser Arg Asp Leu Thr Phe Asp Gly Thr Phe Glu
      450                 455                 460
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His Leu Tyr Val Met Thr Gln Ser Thr Leu Leu Lys Val Pro Val Ala
465   470   475   480
Ser Cys Ala Gln His Leu Asp Cys Ala Ser Cys Leu Ala His Arg Asp
                    485   490   495
Pro Tyr Cys Gly Trp Cys Val Leu Leu Gly Arg Cys Ser Arg Arg Ser
                500   505   510
Glu Cys Ser Arg Gly Gln Gly Pro Glu Gln Trp Leu Trp Ser Phe Gln
            515   520   525
Pro Glu Leu Gly Cys Leu Gln Val Ala Ala Met Ser Pro Ala Asn Ile
        530   535   540
Ser Arg Glu Glu Thr Arg Glu Val Phe Leu Ser Val Pro Asp Leu Pro
545   550   555   560
Pro Leu Trp Pro Gly Glu Ser Tyr Ser Cys His Phe Gly Glu His Gln
                565   570   575
Ser Pro Ala Leu Leu Thr Gly Ser Gly Val Met Cys Pro Ser Pro Asp
            580   585   590
Pro Ser Glu Ala Pro Val Leu Pro Arg Gly Ala Asp Tyr Val Ser Val
        595   600   605
Ser Val Glu Leu Arg Phe Gly Ala Val Val Ile Ala Lys Thr Ser Leu
        610   615   620
Ser Phe Tyr Asp Cys Val Ala Val Thr Glu Leu Arg Pro Ser Ala Gln
625   630   635   640
Cys Gln Ala Cys Val Ser Ser Arg Trp Gly Cys Asn Trp Cys Val Trp
                645   650   655
Gln His Leu Cys Thr His Lys Ala Ser Cys Asp Ala Gly Pro Met Val
            660   665   670
Ala Ser His Gln Ser Pro Leu Val Ser Pro Asp Pro Pro Ala Arg Gly
        675   680   685
Gly Pro Ser Pro Ser Pro Pro Thr Ala Pro Lys Ala Leu Ala Thr Pro
    690   695   700
Ala Pro Asp Thr Leu Pro Val Glu Pro Gly Ala Pro Ser Thr Ala Thr
705   710   715   720
Ala Ser Asp Ile Ser Pro Gly Ala Ser Pro Ser Leu Leu Ser Pro Trp
                725   730   735
Gly Pro Trp Ala Gly Ser Gly Ser Ile Ser Ser Pro Gly Ser Thr Gly
            740   745   750
Ser Pro Leu His Glu Glu Pro Ser Pro Pro Ser Pro Gln Asn Gly Pro
        755   760   765
Gly Thr Ala Val Pro Ala Pro Thr Asp Phe Arg Pro Ser Ala Thr Pro
    770   775   780
Glu Asp Leu Leu Ala Ser Pro Leu Ser Pro Ser Glu Val Ala Ala Val
785   790   795   800
Pro Pro Ala Asp Pro Gly Pro Glu Ala Leu His Pro Thr Val Pro Leu
                805   810   815
Asp Leu Pro Pro Ala Thr Val Pro Ala Thr Thr Phe Pro Gly Ala Met
            820   825   830
Gly Ser Val Lys Pro Ala Leu Asp Trp Leu Thr Arg Glu Gly Gly Glu
            835   840   845
Leu Pro Glu Ala Asp Glu Trp Thr Gly Gly Asp Ala Pro Ala Phe Ser
    850   855   860
Thr Ser Thr Leu Leu Ser Gly Asp Gly Asp Ser Ala Glu Leu Glu Gly
865   870   875   880
Pro Pro Ala Pro Leu Ile Leu Pro Ser Ser Leu Asp Tyr Gln Tyr Asp
                885   890   895
Thr Pro Gly Leu Trp Glu Leu Glu Glu Ala Thr Leu Gly Ala Ser Ser
            900   905   910
Cys Pro Cys Val Glu Ser Val Gln Gly Ser Thr Leu Met Pro Val His
        915   920   925
Val Glu Arg Glu Ile Arg Leu Leu Gly Arg Asn Leu His Leu Phe Gln
    930   935   940

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Asp Gly Pro Gly Asp Asn Glu Cys Val Met Glu Leu Glu Gly Leu Glu
945             950             955             960
Val Val Val Glu Ala Arg Val Glu Cys Glu Pro Pro Pro Asp Thr Gln
            965             970             975
Cys His Val Thr Cys Gln Gln His Gln Leu Ser Tyr Glu Ala Leu Gln
            980             985             990
Pro Glu Leu Arg Val Gly Leu Phe Leu Arg Arg Ala Gly Arg Leu Arg
            995             1000            1005
Val Asp Ser Ala Glu Gly Leu His Val Val Leu Tyr Asp Cys Ser Val
    1010            1015            1020
Gly His Gly Asp Cys Ser Arg Cys Gln Thr Ala Met Pro Gln Tyr Gly
1025            1030            1035            1040
Cys Val Trp Cys Glu Gly Glu Arg Pro Arg Cys Val Thr Arg Glu Ala
            1045            1050            1055
Cys Gly Glu Ala Glu Ala Val Ala Thr Gln Cys Pro Ala Pro Leu Ile
            1060            1065            1070
His Ser Val Glu Pro Leu Thr Gly Pro Val Asp Gly Gly Thr Arg Val
            1075            1080            1085
Thr Ile Arg Gly Ser Asn Leu Gly Gln His Val Gln Asp Val Leu Gly
    1090            1095            1100
Met Val Thr Val Ala Gly Val Pro Cys Ala Val Asp Ala Gln Glu Tyr
1105            1110            1115            1120
Glu Val Ser Ser Ser Leu Val Cys Ile Thr Gly Ala Ser Gly Glu Glu
            1125            1130            1135
Val Ala Gly Ala Thr Ala Val Glu Val Pro Gly Arg Gly Arg Gly Val
            1140            1145            1150
Ser Glu His Asp Phe Ala Tyr Gln Asp Pro Lys Val His Ser Ile Phe
    1155            1160            1165
Pro Ala Arg Gly Pro Arg Ala Gly Gly Thr Arg Leu Thr Leu Asn Gly
    1170            1175            1180
Ser Lys Leu Leu Thr Gly Arg Leu Glu Asp Ile Arg Val Val Val Gly
1185            1190            1195            1200
Asp Gln Pro Cys His Leu Leu Pro Glu Gln Gln Ser Glu Gln Leu Arg
            1205            1210            1215
Cys Glu Thr Ser Pro Arg Pro Thr Pro Ala Thr Leu Pro Val Ala Val
            1220            1225            1230
Trp Phe Gly Ala Thr Glu Arg Arg Leu Gln Arg Gly Gln Phe Lys Tyr
    1235            1240            1245
Thr Leu Asp Pro Asn Ile Thr Ser Ala Gly Pro Thr Lys Ser Phe Leu
    1250            1255            1260
Ser Gly Gly Arg Glu Ile Cys Val Arg Gly Gln Asn Leu Asp Val Val
1265            1270            1275            1280
Gln Thr Pro Arg Ile Arg Val Thr Val Val Ser Arg Met Leu Gln Pro
            1285            1290            1295
Ser Gln Gly Leu Gly Arg Arg Arg Arg Val Val Pro Glu Thr Ala Cys
    1300            1305            1310
Ser Leu Gly Pro Ser Cys Ser Ser Gln Gln Phe Glu Glu Pro Cys His
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Val Asn Ser Ser Gln Leu Ile Thr Cys Arg Thr Pro Ala Leu Pro Gly
    1330            1335            1340
Leu Pro Glu Asp Pro Trp Val Arg Val Glu Phe Ile Leu Asp Asn Leu
1345            1350            1355            1360
Val Phe Asp Phe Ala Thr Leu Asn Pro Thr Pro Phe Ser Tyr Glu Ala
            1365            1370            1375
Asp Pro Thr Leu Gln Pro Leu Asn Pro Glu Asp Pro Thr Met Pro Phe
            1380            1385            1390
Arg His Lys Pro Gly Ser Val Phe Ser Val Glu Gly Glu Asn Leu Asp
    1395            1400            1405
Leu Ala Met Ser Lys Glu Glu Val Val Ala Met Ile Gly Asp Gly Pro
    1410            1415            1420
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Cys Val Val Lys Thr Leu Thr Arg His His Leu Tyr Cys Glu Pro Pro
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Val Glu Gln Pro Leu Pro Arg His His Ala Leu Arg Glu Ala Pro Asp
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Ser Leu Pro Glu Phe Thr Val Gln Met Gly Asn Leu Arg Phe Ser Leu
          1460              1465              1470
Gly His Val Gln Tyr Asp Gly Glu Ser Pro Gly Ala Phe Pro Val Ala
      1475              1480              1485
Ala Gln Val Gly Leu Gly Val Gly Thr Ser Leu Leu Ala Leu Gly Val
      1490              1495              1500
Ile Ile Ile Val Leu Met Tyr Arg Arg Lys Ser Lys Gln Ala Leu Arg
1505              1510              1515              1520
Asp Tyr Lys Lys Val Gln Ile Gln Leu Glu Asn Leu Glu Ser Ser Val
          1525              1530              1535
Arg Asp Arg Cys Lys Lys Glu Phe Thr Asp Leu Met Thr Glu Met Thr
          1540              1545              1550
Asp Leu Thr Ser Asp Leu Leu Gly Ser Gly Ile Pro Phe Leu Asp Tyr
      1555              1560              1565
Lys Val Tyr Ala Glu Arg Ile Phe Phe Pro Gly His Arg Glu Ser Pro
      1570              1575              1580
Leu His Arg Asp Leu Gly Val Pro Glu Ser Arg Arg Pro Thr Val Glu
1585              1590              1595              1600
Gln Gly Leu Gly Gln Leu Ser Asn Leu Leu Asn Ser Lys Leu Phe Leu
          1605              1610              1615
Thr Lys Phe Ile His Thr Leu Glu Ser Gln Arg Thr Phe Ser Ala Arg
          1620              1625              1630
Asp Arg Ala Tyr Val Ala Ser Leu Leu Thr Val Ala Leu His Gly Lys
      1635              1640              1645
Leu Glu Tyr Phe Thr Asp Ile Leu Arg Thr Leu Leu Ser Asp Leu Val
      1650              1655              1660
Ala Gln Tyr Val Ala Lys Asn Pro Lys Leu Met Leu Arg Arg Thr Glu
1665              1670              1675              1680
Thr Val Val Glu Lys Leu Leu Thr Asn Trp Met Ser Ile Cys Leu Tyr
          1685              1690              1695
Thr Phe Val Arg Asp Ser Val Gly Glu Pro Leu Tyr Met Leu Phe Arg
          1700              1705              1710
Gly Ile Lys His Gln Val Asp Lys Gly Pro Val Asp Ser Val Thr Gly
      1715              1720              1725
Lys Ala Lys Tyr Thr Leu Asn Asp Asn Arg Leu Leu Arg Glu Asp Val
      1730              1735              1740
Glu Tyr Arg Pro Leu Thr Leu Asn Ala Leu Leu Ala Val Gly Pro Gly
1745              1750              1755              1760
Ala Gly Glu Ala Gln Gly Val Pro Val Lys Val Leu Asp Cys Asp Thr
          1765              1770              1775
Ile Ser Gln Ala Lys Glu Lys Met Leu Asp Gln Leu Tyr Lys Gly Val
          1780              1785              1790
Pro Leu Thr Gln Arg Pro Asp Pro Arg Thr Leu Asp Val Glu Trp Arg
      1795              1800              1805
Ser Gly Val Ala Gly His Leu Ile Leu Ser Asp Glu Asp Val Thr Ser
      1810              1815              1820
Glu Val Gln Gly Leu Trp Arg Arg Leu Asn Thr Leu Gln His Tyr Lys
1825              1830              1835              1840
Val Pro Asp Gly Ala Thr Val Ala Leu Val Pro Cys Leu Thr Lys His
          1845              1850              1855
Val Leu Arg Glu Asn Gln Asp Tyr Val Pro Gly Glu Arg Thr Pro Met
          1860              1865              1870
Leu Glu Asp Val Asp Glu Gly Gly Ile Arg Pro Trp His Leu Val Lys
      1875              1880              1885
Pro Ser Asp Glu Pro Glu Pro Pro Arg Pro Arg Arg Gly Ser Leu Arg
      1890              1895              1900
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Gly Gly Glu Arg Glu Arg Ala Lys Ala Ile Pro Glu Ile Tyr Leu Thr
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Arg Leu Leu Ser Met Lys Gly Thr Leu Gln Lys Phe Val Asp Asp Leu
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Phe Gln Val Ile Leu Ser Thr Ser Arg Pro Val Pro Leu Ala Val Lys
            1940              1945              1950
Tyr Phe Phe Asp Leu Leu Asp Glu Gln Ala Gln Gln His Gly Ile Ser
            1955              1960              1965
Asp Gln Asp Thr Ile His Ile Trp Lys Thr Asn Ser Leu Pro Leu Arg
    1970              1975              1980
Phe Trp Ile Asn Ile Ile Lys Asn Pro Gln Phe Val Phe Asp Val Gln
1985              1990              1995              2000
Thr Ser Asp Asn Met Asp Ala Val Leu Leu Val Ile Ala Gln Thr Phe
            2005              2010              2015
Met Asp Ala Cys Thr Leu Ala Asp His Lys Leu Gly Arg Asp Ser Pro
            2020              2025              2030
Ile Asn Lys Leu Leu Tyr Ala Arg Asp Ile Pro Arg Tyr Lys Arg Met
            2035              2040              2045
Val Glu Arg Tyr Tyr Ala Asp Ile Arg Gln Thr Val Pro Ala Ser Asp
    2050              2055              2060
Gln Glu Met Asn Ser Val Leu Ala Glu Leu Ser Trp Asn Tyr Ser Gly
2065              2070              2075              2080
Asp Leu Gly Ala Arg Val Ala Leu His Glu Leu Tyr Lys Tyr Ile Asn
            2085              2090              2095
Lys Tyr Tyr Asp Gln Ile Ile Thr Ala Leu Glu Glu Asp Gly Thr Ala
    2100              2105              2110
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```
26/27

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ccagcgaccc tgtgacaccg gtctgcaggg agttggggac taagggcttc cagagagtgg    6960
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<213> Artificial Sequence

<220>
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<400> 36
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<220>
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<220>
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